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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/898,650
Filing Date: July 03, 2001
Appellant(s): APOSTOLOPOULOS ET AL.

John P. Wagner, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/22/2008 appealing from the Office action mailed 12/31/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

This appeal involves claims 1-12 and 14-24.The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

EP 0915598	Matsushita Electric Industrial Co.	09-1998
7,062,250	Kosaka	06-2006

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 5-10, 12, 14-20, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0915598 A2 to Matsushita Electric Industrial Co., LTD (Matsushita) in view of U.S. Patent 7,062,250 to Kosaka.

Regarding claim 1, Matsushita teaches multimedia clients (16), a network connection for receiving a plurality of multiple description bitstreams (col. 4-5, ll. 58-4), which reads on a multiple description receiving portion, wherein the client inherently has a memory coupled to the receiving portion to store the plural bitstreams in respective portions, in order to process the signals separately from different network paths (col. 5-6, ll. 42-21).

Matsushita teaches adjusting the number of media push engines based upon network traffic congestion (col. 4, ll. 28-46), wherein said multiple description receiving portion receives a particular multiple description bitstream from a first server that said particular multiple description bitstream is stored on based on a (at least one) level of service said first server is capable of providing, and said multiple description receiving portion potentially receives said particular multiple description bitstream at a later time from a second server because said particular multiple bitstream was redistributed to said second server because said second server is capable of providing a higher level of service than said first server (see fig. 7-8, col. 8, ll. 52-58, col. 9, ll. 12-17, col. 9, ll. 31-51, col. 10, ll. 16-22).

Matsushita teaches a reconstructing the components into a reconstructed stream (col. 5-6, ll. 42-21), which reads on a synchronization module coupled to the memory and adapted to blend the multiple bitstreams and a decoder for decoding the plural bitstreams. Matsushita teaches the client sending messages to the push engines which determines appropriate operation characteristics of the client in that the client enables the push engines to compensate for network congestion (col. 9, ll. 37-41), which reads

on a source control module coupled to the synchronization module, wherein the module determines appropriate operation characteristics of the client. Further, Matsushita shows a computer (16), which clearly has a user interface device coupled to the decoder, wherein the interface presents the bitstreams to the user (col. 1, ll. 36-44, col. 5, ll.10-12).

Matsushita teaches a source control module to make decisions on how many of the multiple bitstreams to receive (col. 9, ll. 37-41), but Matsushita is silent on monitoring power consumption by said client, wherein said client uses information about said power consumption to make a decision. Kosaka teaches monitoring power consumption by said client (fig. 1, label 11, col. 2, ll. 48-56), wherein said client uses information about said power consumption to make a decision (col. 4, ll. 5-19, 29-44, and 54-63, see also fig. 3: Kosaka teaches sending and receiving different amounts of data based upon the power of the client device, such as removing the video and maintaining the voice communication (col. 4-5, ll. 64-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Matsushita by monitoring power consumption by said client, wherein said client uses information about said power consumption to make a decision as taught by Kosaka in order to reduce power consumption and increase communication periods (Kosaka: col. 1, ll. 41-44).

Regarding claim 2, Matsushita is silent on a mobile client. In analogous art, Kosaka teaches receiving video data over a channel of a wireless network, wherein the

devices can be cellular phones (col. 2, ll. 34-38, col. 3, ll. 29-38), which equates to a mobile device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Matsushita by using a mobile device as taught by Kosaka in order to provide video in different locations and thereby increasing desirable functionality to the user.

Regarding claim 3, Matsushita teaches a channel quality monitor for monitoring characteristics of channels from which the bitstreams are received (col. 9, ll. 37-41).

Regarding claim 5, Matsushita teaches a display device on a computer (label 16).

Regarding claim 6, Matsushita teaches presenting the stream (col. 10, ll. 20-22, col. 11, ll. 13-18), wherein the stream can be audio and/or video (col. 11, ll. 13-18), and must inherently have an audio output in order to present the stream to the user.

Regarding claim 7, Matsushita teaches transmitting information, related to the operation characteristics of the client to the push engines (col. 9, ll. 37-41).

Regarding claims 8, Matsushita teaches multimedia clients (16), a network connection for receiving a plurality of multiple description bitstreams (col. 4-5, ll. 47-4), which reads on receiving a first and second multiple description bitstreams at the client.

Matsushita teaches the format of the data as using video, such as MPEG (col. 7, ll. 12-14), which inherently stores and decodes the bitstreams for presentation (col. 11, ll. 13-17). Matsushita teaches the client sending messages to the push engines which determines appropriate operation characteristics of the client in that the client enables the push engines to compensate for network congestion (col. 9, ll. 37-41), which reads on a source control module coupled to the synchronization module, wherein the module determines appropriate operation characteristics of the client. Further, Matsushita shows a computer (16), for presenting the bitstreams to the user (col. 1, ll. 36-44, col. 5, ll. 10-12).

Matsushita teaches a source control module to make decisions on how many of the multiple bitstreams to receive (col. 9, ll. 37-41), but Matsushita is silent on monitoring power consumption by said client, wherein said client uses information about said power consumption to make a decision. Kosaka teaches monitoring power consumption by said client (fig. 1, label 11, col. 2, ll. 48-56), wherein said client uses information about said power consumption to make a decision (col. 4, ll. 5-19, see also fig. 3: Kosaka teaches sending and receiving different amounts of data based upon the power of the client device, such as removing the video and maintaining the voice communication (col. 4-5, ll. 64-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Matsushita by monitoring power consumption by said client, wherein said client uses information about said power consumption to make a decision as taught by Kosaka in order to reduce power consumption and increase communication periods (Kosaka: col. 1, ll. 41-44).

Regarding claim 9, Matsushita is silent on a mobile client. In analogous art, Kosaka teaches receiving video data over a channel of a wireless network, wherein the devices can be cellular phones (col. 2, ll. 34-38, col. 3, ll. 29-38), which equates to a mobile device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Matsushita by using a mobile device as taught by Kosaka in order to provide video in different locations and thereby increasing desirable functionality to the user.

Regarding claim 10, Matsushita inherently stores the first and second bitstreams in respective memory portions in order to prevent data from being overwritten by another packet before being used.

Regarding claim 12, Matsushita teaches determining operation characteristics by monitoring the characteristics of channels on which said first and second streams are received (col. 9, ll. 37-41).

Regarding claim 14, Matsushita teaches adjusting operation characteristics by providing information to the push servers to accommodate for network congestion (col. 9, ll. 31-54).

Regarding claim 15, Matsushita teaches presenting the stream, wherein the stream is video (col. 11, ll. 13-18), which inherently uses a display.

Regarding claim 16, Matsushita teaches presenting the stream, wherein the stream is audio (col. 11, ll. 13-18), which inherently uses an audio output device.

Regarding claim 17, Matsushita teaches adjusting operation characteristics by providing information to the push servers to accommodate for network congestion (col. 9, ll. 31-54), which reads on transmitting information related to appropriate operation characteristics from the client to components (push servers) of a network to which the client is adapted to be communicatively coupled.

Regarding claim 18, Matsushita teaches multimedia clients (16), a network connection for receiving a plurality of multiple description bitstreams (col. 4-5, ll. 58-4), which reads on a multiple description receiving portion, wherein the client inherently has a memory coupled to the receiving portion to store the plural bitstreams in respective portions, in order to process the signals separately from different network paths (col. 5-6, ll. 42-21). Matsushita teaches a reconstructing the components into a reconstructed stream (col. 5-6, ll. 42-21), which reads on a synchronization module coupled to the memory and adapted to blend the multiple bitstreams and a decoder for decoding the plural bitstreams. Matsushita teaches the client sending messages to the push engines which determines appropriate operation characteristics of the client in that the client

enables the push engines to compensate for network congestion (col. 9, ll. 37-41), which reads on a source control module coupled to the synchronization module, wherein the module determines appropriate operation characteristics of the client. Further, Matsushita shows a computer (16), which clearly has a user interface device coupled to the decoder, wherein the interface presents the bitstreams to the user (col. 1, ll. 36-44, col. 5, ll.10-12, col. 11, ll. 13-18).

Matsushita teaches a source control module to make decisions on how many of the multiple bitstreams to receive (col. 9, ll. 37-41), but Matsushita is silent on monitoring power consumption by said client, wherein said client uses information about said power consumption to make a decision. Kosaka teaches monitoring power consumption by said client (fig. 1, label 11, col. 2, ll. 48-56), wherein said client uses information about said power consumption to make a decision (col. 4, ll. 5-19, see also fig. 3: Kosaka teaches sending and receiving different amounts of data based upon the power of the client device, such as removing the video and maintaining the voice communication (col. 4-5, ll. 64-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Matsushita by monitoring power consumption by said client, wherein said client uses information about said power consumption to make a decision as taught by Kosaka in order to reduce power consumption and increase communication periods (Kosaka: col. 1, ll. 41-44).

Regarding claim 19, Matsushita is silent on a mobile client. In analogous art, Kosaka teaches receiving video data over a channel of a wireless network, wherein the

devices can be cellular phones (col. 2, ll. 34-38, col. 3, ll. 29-38), which equates to a mobile device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Matsushita by using a mobile device as taught by Kosaka in order to provide video in different locations and thereby increasing desirable functionality to the user.

Regarding claim 20, Matsushita teaches a channel quality monitor for monitoring characteristics of channels from which the bitstreams are received (col. 9, ll. 37-41).

Regarding claim 22, Matsushita teaches presenting the stream, wherein the stream is video (col. 11, ll. 13-18), which inherently uses a display.

Regarding claim 23, Matsushita teaches presenting the stream, wherein the stream is audio (col. 11, ll. 13-18), which inherently uses an audio output device.

Regarding claim 24, Matsushita teaches adjusting operation characteristics by providing information to the push servers to accommodate for network congestion (col. 9, ll. 31-54), which reads on transmission means coupled to said synchronization module, wherein the transmission means transmits information related to operation characteristics from the client to components (push servers) of a network to which the client is adapted to be communicatively coupled.

3. Claims 4, 11, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0915598 A2 to Matsushita Electric Industrial Co., LTD (Matsushita) and U.S. Patent 7,062,250 to Kosaka in view of "Error-Resilient Video Compression" (Apostolopoulos).

Regarding claim 4, Matsushita teaches audio and video, MPEG, JPEG, and H.261, but is silent on either MPEG-4 Version 2 with NEWPRED or H.263 Version 2 with RPS. In analogous art, Apostolopoulos teaches an error resilient encoder using MPEG-4 Version 2 with NEWPRED and H.263 Version 2 with RPS (pg, 185-186, section 3.4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Matsushita by using MPEG-4 Version 2 with NEWPRED or H.263 Version 2 with RPS as taught by Apostolopoulos in order to benefit from the already present error resilience capabilities of the standardized compression algorithms.

Regarding claim 11, Matsushita teaches audio and video, MPEG, JPEG, and H.261, but is silent on either MPEG-4 Version 2 with NEWPRED or H.263 Version 2 with RPS. In analogous art, Apostolopoulos teaches an error resilient encoder using MPEG-4 Version 2 with NEWPRED and H.263 Version 2 with RPS (pg, 185-186, section 3.4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Matsushita by using MPEG-4 Version 2 with NEWPRED or H.263 Version 2 with RPS as taught by Apostolopoulos in order to

benefit from the already present error resilience capabilities of the standardized compression algorithms.

Regarding claim 21, Matsushita teaches audio and video, MPEG, JPEG, and H.261, but is silent on either MPEG-4 Version 2 with NEWPRED or H.263 Version 2 with RPS. In analogous art, Apostolopoulos teaches an error resilient encoder using MPEG-4 Version 2 with NEWPRED and H.263 Version 2 with RPS (pg, 185-186, section 3.4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Matsushita by using MPEG-4 Version 2 with NEWPRED or H.263 Version 2 with RPS as taught by Apostolopoulos in order to benefit from the already present error resilience capabilities of the standardized compression algorithms.

(10) Response to Argument

To rebut the §103 rejection made in the final office action, Appellants assert on page 12 of the Appeal that Matsushita does not teach or suggest "wherein said client uses information from said power strength monitor make a decision about how many of said multiple description bitstreams to receive," as recited in claims 1, 8, and 18. However, as the final rejection of these claims makes clear, it is not Matsushita alone but its combination with Kosaka that is relied upon to meet that limitation.

Appellant's argument on pages 12 and 13 focuses on the fact that Matsushita teaches that the transmission decision is made at the server and not the client. The Examiner agrees with this interpretation. For the reasons discussed below, it is not necessary for Matsushita to teach that particular limitation to make a valid obviousness rejection, nor is the examiner relying on this reference to teach this.

First, Kosaka specifically teaches a client device making an autonomous decision about what data to receive based on power consumption data:

> "If the remaining power is less than 10% (NO), the control unit 1 further checks at step 103 whether it is more than 1%. If the remaining power is more than 10% (YES), the control unit 1 sets the data

> communication or transmission speed to 64 k bps at step 104, and then effectuates the image communication mode and the voice communication mode… [T]his communication mode effectuates both the voice communication and the image communication." (column 4, lines 29-44)

On the other hand, if the power remaining is too low, the client device disables either the image communication or all communication:

> "[I]f it is determined at step 103 that the remaining power is more than 1% (YES), the control unit 1 sets the communication speed to a lower speed, 8 k bps, at step 107. After step 107, the control unit 1 enables only the voice communication... The control unit 1, however, returns to the main routine to execute the communication termination processing if the remaining power is determined to be less than 1% (NO) at step 103, thus disabling both of the voice communication and the image communication." (col. 4, lines 54-63)

Thus, Kosaka teaches the claimed "client uses information from said power strength monitor to make a decision" about what data to receive. It is therefore not necessary for Matsushita to do so, so long as it is properly combined with Kosaka.

Appellants also assert on page 13 that Matsushita teaches away from having the client make decisions on its own. The Examiner disagrees, and believes that rather than teaching away, Matsushita in fact suggests client participation in the decision making. Matsushita explicitly shows the client generating information used to make the ultimate decision and bidirectionally communicating with the push servers to facilitate it.

> "Referring to Fig. 7, the media push engine [i.e., server] and multimedia client communicate through the network... [A]s required, the media push engine and multimedia client send each other RTCP reports, specifically sender reports and receiver reports as well as any appropriate flow control commands and other session management commands (e.g. Start Push, Pause, Continue)." (col. 8, para. 35)

This would suggest to one of ordinary skill that a robust client device could in fact make the decision about what stream to receive on its own, particularly if the parameter on which the decision in based is local to the device itself, as is the case with power levels. I.e., one reason that Matsushita uses the servers to make the decision is that network congestion is a system wide parameter: "the participating members of the group collectively and distributively make the admission control decisions. One benefit of this distributed approach is that the invention can incorporate intelligent mechanisms to prevent network congestion and to improve quality of service…" (col. 9, lines 10-15) In contrast, client device power level, as taught by Kosaka, is a local parameter that

does not affect the rest of the network. Therefore, it would readily occur to one of ordinary skill that the claimed invention could be implemented with decisions made locally at the client device.

To reiterate, Matsushita does not explicitly disclose decision making at the client, but it does not teach away from that concept and, in the Examiner's opinion, actually suggests it. In any event, Kosaka remedies the deficiency of Matsushita.

Finally, the two references are properly combined. One of ordinary skill would be motivated to combine Matsushita and Kosaka for at least the following reasons: First, having the client make the decision allows the elimination of upstream traffic that otherwise must be used to inform the server of the client's power status. The newly freed bandwidth can be utilized to provide better downstream quality, a goal clearly sought by both references. Second, between the server and the client, it is only possible for the client to make an autonomous decision. If the server makes the decision, it must do so with data provided by the client. On the other hand, the client is in the best position to measure its own power consumption and can be designed to make decisions on what bitstreams to receive on its own using algorithms such as that taught by Kosaka. Thus, one of ordinary skill who wanted to consolidate processing on one side or the other would have to choose the client to make decisions.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Timothy R. Newlin/

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